

In the Claims:

Claims 1 to 14 (Canceled).

15. **(Currently Amended)** A polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having a formula of

~~(His-Asn)_n, (SEQ ID NO:22) where n=3 to 10~~

NH₂-(His-Asn)_n or (His-Asn)_n-COOH, where n=6.

16. **(Currently Amended)** The polynucleotide according to claim 15, wherein the polynucleotide comprises a nucleotide sequence **encoding** ~~that encodes~~ a fusion protein comprising a polypeptide **and** ~~fused at its amino or carboxy terminus to the~~ metal ion affinity peptide, **wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.**

17. **(Original)** A recombinant vector comprising a polynucleotide according to claim 15.

18. **(Original)** A recombinant host cell comprising a recombinant vector according to claim 17.

19. **(Original)** The recombinant host cell according to claim 18, wherein said cell is a prokaryotic cell.

20. **(Original)** The recombinant host cell according to claim 18, wherein said cell is a eukaryotic cell.

Claims 21 to 25 (Canceled).

26. **(Original)** A kit for purifying a protein, comprising:
a) a recombinant vector according to claim 17; and

- b) a metal ion affinity resin.
27. **(Original)** The kit according to claim 26, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
28. **(Original)** The kit according to claim 27, further comprising a column.
29. **(Canceled)**
30. **(Currently Amended)** A polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having the amino acid sequence ~~NH₂-His-Leu-Ile-His-Asn-Val-His-Lys-Glu-Glu-His-Ala-His-Ala-His-Asn-COOH (SEQ ID NO: 1)~~ NH₂-His-Leu-Ile-His-Asn-Val-His-Lys-Glu-Glu-His-Ala-His-Ala-His-Asn or His-Leu-Ile-His-Asn-Val-His-Lys-Glu-Glu-His-Ala-His-Ala-His-Asn-COOH.
31. **(Currently Amended)** The polynucleotide according to claim 30, wherein the polynucleotide comprises a nucleotide sequence encoding ~~that encodes~~ a fusion protein comprising a polypeptide and ~~fused at its amino or carboxy terminus to the~~ metal ion affinity peptide, wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.
32. **(Previously Presented)** A recombinant vector comprising a polynucleotide according to claim 30.
33. **(Previously Presented)** A recombinant host cell comprising a recombinant vector according to claim 30.
34. **(Previously Presented)** The recombinant host cell according to claim 33, wherein said cell is a prokaryotic cell.

35. **(Previously Presented)** The recombinant host cell according to claim 33, wherein said cell is a eukaryotic cell.
36. **(Previously Presented)** A kit for purifying a protein, comprising:
a) a recombinant vector according to claim 32; and
b) a metal ion affinity resin.
37. **(Previously Presented)** The kit according to claim 36, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
38. **(Previously Presented)** The kit according to claim 37, further comprising a column.

Please add the following new claims:

39. **(New)** A polynucleotide comprising a nucleotide sequence that encodes a metal ion affinity peptide having a formula of
 $\text{NH}_2\text{-(His-Asn)}_n$ or $\text{(His-Asn)}_n\text{-COOH}$, where $n=3-5$ or $7-10$.
40. **(New)** The polynucleotide according to claim 39, wherein the polynucleotide comprises a nucleotide sequence encoding a fusion protein comprising a polypeptide and the metal ion affinity peptide, wherein the metal ion affinity peptide is fused to an amino- or carboxy-terminal amino acid of the polypeptide.
41. **(New)** A recombinant vector comprising a polynucleotide according to claim 39.

42. **(New)** A recombinant host cell comprising a recombinant vector according to claim 41.
43. **(New)** The recombinant host cell according to claim 42, wherein said cell is a prokaryotic cell.
44. **(New)** The recombinant host cell according to claim 42, wherein said cell is a eukaryotic cell.
45. **(New)** A kit for purifying a protein, comprising:
a) a recombinant vector according to claim 41; and
b) a metal ion affinity resin.
46. **(New)** The kit according to claim 45, further comprising:
an extraction buffer;
a wash buffer; and
an elution buffer.
47. **(New)** The kit according to claim 46, further comprising a column.